Pioneering for You

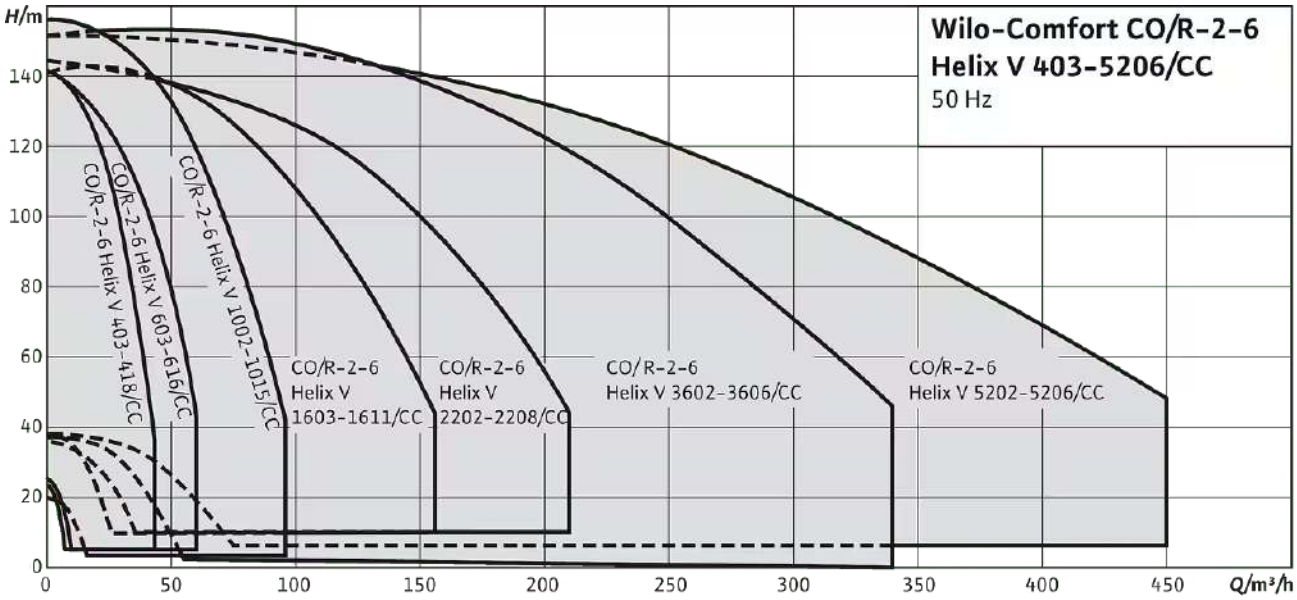
Wilo-Comfort CO-/COR-Helix V.../CC

Your advantages

- Heavy-duty system in accordance with DIN 1988 (EN 806)
- High-efficiency pump hydraulics
- Pressure-loss optimised entire system
- 2 to 6 vertical Helix V series stainless steel high-pressure multistage centrifugal pumps switched in parallel
- Comfort CC control device with extended functions, microcomputer and touchscreen, with or without frequency converter for infinitely variable control of the base-load pump

Recommended services

Maintenance Commissioning WiloCare



Design

Highly efficient, ready for connection water-supply unit (non-self-priming) with 2 to 6 vertically arranged glanded stainless steel high-pressure multistage centrifugal pumps from the Helix V series switched in parallel, including Comfort Controller CC (available with and without frequency converter)

Application

- Fully automatic water supply and pressure boosting in residential, commercial and public buildings, hotels, hospitals, department stores and for industrial systems.
- Pumping of drinking water and process water, cooling water, fire water (apart from fire-fighting systems in accordance with DIN 14462 and with the approval of the local fire safety authorities) or other types of industrial water that do not attack the materials either chemically or mechanically and do not contain abrasive or long-fibre constituents.

Equipment/function

- 2-6 pumps per system of the Helix V 4 to Helix V 52 series with IE2 standard motor, including 7.5 kW and larger IE3 standard motor (optional for smaller motor power)
- Automatic pump control via Comfort Controller CC. The COR systems are additionally equipped with a frequency converter in the switch cabinet.
- Parts that come in contact with the fluid are corrosion-resistant
- Base frame made of galvanised steel, with height-adjustable vibration absorbers for insulation against structure-borne noise
- Pipework made of 1.4404 stainless steel
- Shut-off valve on the suction and pressure sides of each pump
- Non-return valve on the pressure side of each pump
- Diaphragm pressure vessel 8 l, PN16, pressure side
- Pressure sensor, pressure side
- Pressure gauge, pressure side
- Optional low-water cut-out switchgear with pressure gauge, suction side

Typekey

Example:	**Wilo-COR-4 Helix V 2203/1/K/CC**
CO	Compact pressure boosting system
R	Control of the respective base-load pump via frequency converter in the switchgear
4	Number of pumps
Helix V	Pump series
22	Rated volume flow [m^3/h] of the single pump
03	Number of single-pump stages
1	Number of trimmed impellers of a pump
K	With cartridge mechanical seal
CC	Control unit; CC = Comfort Controller

Technical data

- Mains connection 3~230 V/400 V ± 10%, 50 Hz
- Max. fluid temperature 50 °C (70 °C optional)
- Operating pressure 16 bar (25 bar optional)
- Inlet pressure 10 bar
- Nominal connection diameters on discharge side R 1½ - DN 200
- Nominal connection diameter on the intake side R 1½" - DN 200
- Rated speed 2850 rpm
- Protection class IP 54 (CC control device)
- Fuse protection on mains side AC 3 according to motor power and EVU regulations
- Approved fluids (other fluids on request):Note on fluids: Approved fluids are generally water mixtures which do not chemically or mechanically attack the materials used and do not contain either abrasive or fibrous matter
  - Drinking water and domestic hot water
  - Cooling water
  - Fire water

Materials

Helix V 4 to Helix V 16

- Impellers, guide vanes, stage housing made of stainless steel 1.4307
- Pump housing of stainless steel 1.4301
- Shaft of stainless steel 1.4057
- 1.4404 shaft protection sleeve
- O-Ring gaskets made of EPDM (FKM gasket on request)
- Pipework made of 1.4404 stainless steel

Helix V 22 to Helix V 52

- Impellers, guide vanes, stage housing made of stainless steel 1.4307
- Pump housing of stainless steel 1.4308
- Shaft of stainless steel 1.4057
- 1.4404 shaft protection sleeve
- O-Ring gaskets made of EPDM (FKM gasket on request)
- Pipework made of 1.4404 stainless steel

Construction

- Base frame: galvanised steel, with height-adjustable vibration absorbers for comprehensive insulation against structure-borne noise; other versions on request
- Pipework: complete pipework made of stainless steel, suitable for the connection of all piping materials used; the pipework is dimensioned according to the overall hydraulic performance of the pressure boosting system
- Pumps: 2 to 6 pumps switched in parallel of the Helix V 4 to Helix V 52 series; all parts which come into contact with the fluid are made of stainless steel; other versions on request. KTW/WRAS/ACS approval for all parts that come in contact with the fluid
- Valves: each pump is fitted on the suction and pressure side with a shut-off valve or a shut-off flap with DVGW approval mark and on the pressure side with a DVGW/KTW-approved non-return valve
- Diaphragm pressure vessel: 8 l/PN16 arranged on the discharge side with a diaphragm made of butyl rubber, with DVGW/KTW approval, completely safe in accordance with food safety laws, for testing and inspection purposes, with drain and throughflow valve with DVGW/KTW approval in accordance with DIN 4807
- Pressure sensor: 4 to 20 mA, located on the discharge side for controlling the central Comfort Controller CC
- Pressure indication: pressure gauge (∅ 63 mm) arranged on the discharge side; additional digital indication of the discharge pressure on the alphanumeric touchscreen on the Comfort Controller
- Control device/controller; The system is equipped with a Comfort Controller CC as standard; COR additionally with a frequency converter

Scope of delivery

- Factory-mounted, connection-ready pressure boosting system checked for functionality and impermeability
- Packaging
- Installation and operating instructions
- Transport eyelets for self-assembly

Options

Other mains connections on request

Consulting guide

Pressure reducer

Excessively high or a heavily fluctuating inlet pressure will require the installation of a pressure reducer to maintain a constant minimum inlet pressure level. Permitted inlet pressure fluctuation max. 1.0 bar

Volume flow

Up to 400 m^3/h (111 l/s) system configuration in accordance with DIN 1988 (EN 806); with standby pump up to 480 m^3/h (133 l/s) during operation of the standby pump as an auxiliary peak-load unit.

Inlet pressure

The maximum inlet pressure must be taken into account when designing the system configuration. The maximum inlet pressure is calculated from the maximum system operating pressure minus the maximum pump delivery head at Q = 0.

Low-water cut-out switchgear (WMS)

In accordance with DIN 1988 (EN 806) the installation of a WMS low-water cut-out switchgear is required in cases where the pressure boosting systems are connected directly to a public mains power supply; this prevents any possible lowering of the inlet pressure in the mains supply line to values less than 1.0 bar. Please make sure to include this with the initial order for the pressure boosting system. The WMS will then be installed in the pressure boosting system, electrically wired and fully tested by Wilo during the final functional test.

Residual-current-operated protection switch

When installing residual-current-operated protection switches in conjunction with frequency converters, bear in mind that only universal-current-sensitive residual-current-operated protection switches in accordance with DIN/VDE 0664 are to be fitted.

Standards/directives

The overall system conforms with the requirements of

- DIN 1988 Part 5
- DIN 1988 Part 6* (**)

* The specifications in DIN 1988 (EN 806) and of the water-supply companies are to be observed. Regarding the electrical components, the system conforms with the requirements of

- VDE 0100 Part 430/Part 540
- VDE 0110 Part 1/Part 2
- VDE 0660 Part 101/Part 107 and
- DIN 40719/IEC 754

Always observe the specifications in DIN 1988 (EN 806) when using and operating the pressure boosting system.

(**)This does not apply to fire-extinguishing systems in accordance with DIN14462. Please request these separately.

Product list

Product description	Number of pumps	Flow rate Q	Rated power P_2	Article number
Comfort CO-2 Helix V 403/K/CC	2	4 m³/h	0.37 kW	2536405
Comfort CO-2 Helix V 406/K/CC	2	4 m³/h	0.75 kW	2536407
Comfort CO-2 Helix V 407/K/CC	2	4 m³/h	1.1 kW	2536408
Comfort CO-2 Helix V 409/K/CC	2	4 m³/h	1.1 kW	2536409
Comfort CO-2 Helix V 410/K/CC	2	4 m³/h	1.5 kW	2536410
Comfort CO-2 Helix V 412/K/CC	2	4 m³/h	1.5 kW	2536411
Comfort CO-2 Helix V 604/K/CC	2	6 m³/h	0.75 kW	2535311
Comfort CO-2 Helix V 605/K/CC	2	6 m³/h	1.1 kW	2535312
Comfort CO-2 Helix V 606/K/CC	2	6 m³/h	1.1 kW	2535313
Comfort CO-2 Helix V 607/K/CC	2	6 m³/h	1.5 kW	2535314
Comfort CO-2 Helix V 608/K/CC	2	6 m³/h	1.5 kW	2535315
Comfort CO-2 Helix V 1002/K/CC	2	10 m³/h	0.75 kW	2534090
Comfort CO-2 Helix V 1003/K/CC	2	10 m³/h	1.1 kW	2534091
Comfort CO-2 Helix V 1004/K/CC	2	10 m³/h	1.5 kW	2534092
Comfort CO-2 Helix V 3606/K/CC	2	36 m³/h	18.5 kW	2532357
Comfort CO-2 Helix V 5205/2/K/CC	2	52 m³/h	18.5 kW	2530669
Comfort CO-2 Helix V 5205/K/CC	2	52 m³/h	18.5 kW	2530670
Comfort CO-3 Helix V 403/K/CC	3	4 m³/h	0.37 kW	2536415
Comfort CO-4 Helix V 403/K/CC	4	4 m³/h	0.37 kW	2536425
Comfort CO-4 Helix V 3606/K/CC	4	36 m³/h	18.5 kW	2532363
Comfort CO-4 Helix V 5205/2/K/CC	4	52 m³/h	18.5 kW	2530687
Comfort CO-4 Helix V 5205/K/CC	4	52 m³/h	18.5 kW	2530688
Comfort COR-2 Helix V 403/K/CC	2	4 m³/h	0.37 kW	2536455
Comfort COR-2 Helix V 1609/K/CC	2	16 m³/h	7.5 kW	2532259
Comfort COR-2 Helix V 1610/K/CC	2	16 m³/h	7.5 kW	2532260
Comfort COR-2 Helix V 1611/K/CC	2	16 m³/h	7.5 kW	2532261
Comfort COR-2 Helix V 2205/K/CC	2	22 m³/h	7.5 kW	2530550
Comfort COR-2 Helix V 2206/K/CC	2	22 m³/h	7.5 kW	2530551
Comfort COR-2 Helix V 3603/1/K/CC	2	36 m³/h	7.5 kW	2530625
Comfort COR-2 Helix V 5202/K/CC	2	52 m³/h	7.5 kW	2530709
Comfort COR-3 Helix V 403/K/CC	3	4 m³/h	0.37 kW	2536465
Comfort COR-3 Helix V 410/K/CC	3	4 m³/h	1.5 kW	2536470
Comfort COR-3 Helix V 412/K/CC	3	4 m³/h	1.5 kW	2536471
Comfort COR-3 Helix V 414/K/CC	3	4 m³/h	2.2 kW	2536472
Comfort COR-3 Helix V 416/K/CC	3	4 m³/h	2.2 kW	2536473
Comfort COR-3 Helix V 418/K/CC	3	4 m³/h	2.2 kW	2536474
Comfort COR-3 Helix V 607/K/CC	3	6 m³/h	1.5 kW	2535398
Comfort COR-3 Helix V 608/K/CC	3	6 m³/h	1.5 kW	2535399
Comfort COR-3 Helix V 609/K/CC	3	6 m³/h	2.2 kW	2535400
Comfort COR-3 Helix V 610/K/CC	3	6 m³/h	2.2 kW	2535401

Product description	Number of pumps	Flow rate Q	Rated power P_2	Article number
Comfort COR-3 Helix V 611/K/CC	3	6 m³/h	2.2 kW	2535402
Comfort COR-3 Helix V 612/K/CC	3	6 m³/h	3 kW	2535403
Comfort COR-3 Helix V 613/K/CC	3	6 m³/h	3 kW	2535404
Comfort COR-3 Helix V 614/K/CC	3	6 m³/h	3 kW	2535405
Comfort COR-3 Helix V 615/K/CC	3	6 m³/h	3 kW	2535406
Comfort COR-3 Helix V 1004/K/CC	3	10 m³/h	1.5 kW	2534176
Comfort COR-3 Helix V 1005/K/CC	3	10 m³/h	2.2 kW	2534177
Comfort COR-3 Helix V 1006/K/CC	3	10 m³/h	2.2 kW	2534178
Comfort COR-3 Helix V 1007/K/CC	3	10 m³/h	3 kW	2534179
Comfort COR-3 Helix V 1008/K/CC	3	10 m³/h	3 kW	2534180
Comfort COR-3 Helix V 1012/K/CC	3	10 m³/h	5.5 kW	2534184
Comfort COR-3 Helix V 1013/K/CC	3	10 m³/h	5.5 kW	2534185
Comfort COR-3 Helix V 1015/K/CC	3	10 m³/h	5.5 kW	2534187
Comfort COR-3 Helix V 1603/K/CC	3	16 m³/h	2.2 kW	2532264
Comfort COR-3 Helix V 1604/K/CC	3	16 m³/h	3 kW	2532265
Comfort COR-3 Helix V 1607/K/CC	3	16 m³/h	5.5 kW	2532268
Comfort COR-3 Helix V 1608/K/CC	3	16 m³/h	5.5 kW	2532269
Comfort COR-3 Helix V 2202/K/CC	3	22 m³/h	3 kW	2530554
Comfort COR-3 Helix V 2204/K/CC	3	22 m³/h	5.5 kW	2530556
Comfort COR-3 Helix V 3602/K/CC	3	36 m³/h	5.5 kW	2530632
Comfort COR-3 Helix V 5202/2/K/CC	3	52 m³/h	5.5 kW	2530717
Comfort COR-4 Helix V 403/K/CC	4	4 m³/h	0.37 kW	2536475

Pioneering for You

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